

Shunsuke SERIZAWA*: Taxonomical notes on Asian ferns (3)

芹沢俊介*: アジア産シダ植物考察 (3)

9. *Mecodium coreanum* (Nakai) Serizawa, comb. nov.*Hymenophyllum coreanum* Nakai, Bot. Mag. Tokyo 40: 246 (1926).*Hymenophyllum paniculiflorum* auct. non Pr.: Nakai, ditto 40: 246 (1926).*Mecodium paniculiflorum* auct. non Copel.: H. Ito, Journ. Jap. Bot. 24: 123 (1949), 39: 374 (1964); Ohwi, Fl. Jap. Pter. 26 (1957).*Mecodium polyanthos* Copel. sensu lat.: K. Iwatsuki, Acta Phytotax. Geobot. 17: 66 (1958), in Tagawa, Col. Ill. Jap. Pter. 42 (1959).

Nom. Jap. Hime-kokeshinobu (H. Ito), Korai-kokeshinobu (Nakai).

Distr. Japan (Honshu and Shikoku) and Korea.

A small fern mainly growing on rocks, or rarely on bark, in the temperate broad-leaved forests or subalpine coniferous forests. The laminae are variable in size and dissection, and they are usually 1.5–2 cm long and bipinnate; however, in the well developed form, they are up to 3.5 cm long and tripinnate, or in the dwarf form on exposed, dried rocks, they are only about 0.5 cm long and well fructified.

The present fern is very similar to a form of *Mecodium polyanthos* in high altitude, where sometimes it is rather difficult to separate those two species. However, *M. coreanum* is well differentiated from *M. polyanthos* in smaller, less dissected and stumpy laminae, broader segments and indusia, and crowded sori on the apical parts of laminae. On the other hand, *M. coreanum* has sometimes been confused with *M. wrightii*, but distinctly differs from it in broader angle of branching of pinnae or segments, shorter and stumpy segments, and crowded sori.

K. Iwatsuki (1959) noted that this fern is probably an abnormal form of *M. polyanthos* grown at the unsuitable habitats such as sunny, dry places or on rocks in high altitude. However, both species are often found in the same habitat side by side and, even in this condition, it is easy to separate these two species adequately. Although *M. coreanum* is closely allied to

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M. polyanthos, it seems to be more natural to treat *M. coreanum* as a distinct species, instead of a variety or subspecies of *M. polyanthos*.

Some authors identified this fern with *Hymenophyllum* (or *Mecodium*) *paniculiflorum*, but this fern differs from it in smaller and less dissected laminae, broader segments, and geographical distribution.

10. ***Dryopteris subintegriloba*** Serizawa, sp. nov. Fig. 1, a.

Rhizoma crassum ascendens, circiter 2.5 cm crassum, apice dense squamatum, squamis linearibus vel subulatis 1.4–2 cm longis rufo-brunneis. Frondes 3–4 fasciculatae. Stipes 25–45 cm longus circiter 2 mm crassus, stramineus et non purpurascens, dense squamatus; squamis inferioribus lineari-lanceolatis 8–10 mm longis 0.5–1.5 mm latis, apice filiformi-acuminatis margine integris subrigido-membranaceis fusco-brunneis, squamis mediis et superioribus lanceolatis 3–6 mm longis fuscis. Lamina frondis ovata vel elongato-ovata 25–40 cm longa 14–22 cm lata, apice acuminata gradatim attenuata vel indistincte caudata subrigido-herbacea bipinnata, rhachidi squamis 2–3 mm longis fuscis subdense oblecta; pinnis utrinque 6–7 jugis, a se 3–7 cm remotis, pinnis inferioribus suboppositis deltoideo-lanceolatis 9–15 cm longis 3–5 cm latis apice indistincte caudato-acuminatis basi latissime cuneatis distincte petiolulatis, petiolulis 5–10 mm longis; pinnulis pinnarum inferiorum utrinque 8–12 jugis, pinnulis infimis longissimis vel aequilongis quam secundis, deltoideo-lanceolatis 2–3 cm longis 0.8–1.3 cm latis apice obtusis vel acutis margine pinnatifidis vel crenatis basi cordatis utroque latere auriculatis distincte petiolulatis, petiolulis 1–3 mm longis, pinnulis mediis 1.5–2 cm longis margine obscure crenatis, obscure serratis vel subintegris; costis pinnarum et pinnularum squamis saccatis 1–2 mm longis apice filiformi-acuminatis toto brunneis vel tantum superiore fusco-brunneis subparce vel parce oblectis. Sori mediales vel leviter marginales, circiter 1 mm lati, in pagina inferiori tota siti, sed interdum ad apicem laminae et pinnarum non siti; indusiis reniformi-cordatis, aequilatis quam soris, permanentis.

Nom. Jap. Horai-benishida, nov.

Hab. Taiwan: Jihyuen-tan (Nichigetsutan), Pref. Nan-tow (S. Serizawa no. 1411, July 1967—holotype in TNS, no. 1412–1427, 1536–1545, July 1967), Lienhwachih (Rengechi), Pref. Nan-tow (S. Serizawa no. 448–450, July 1967), Lake Suisya (S. Sasaki, Sept. 1929, TNS).

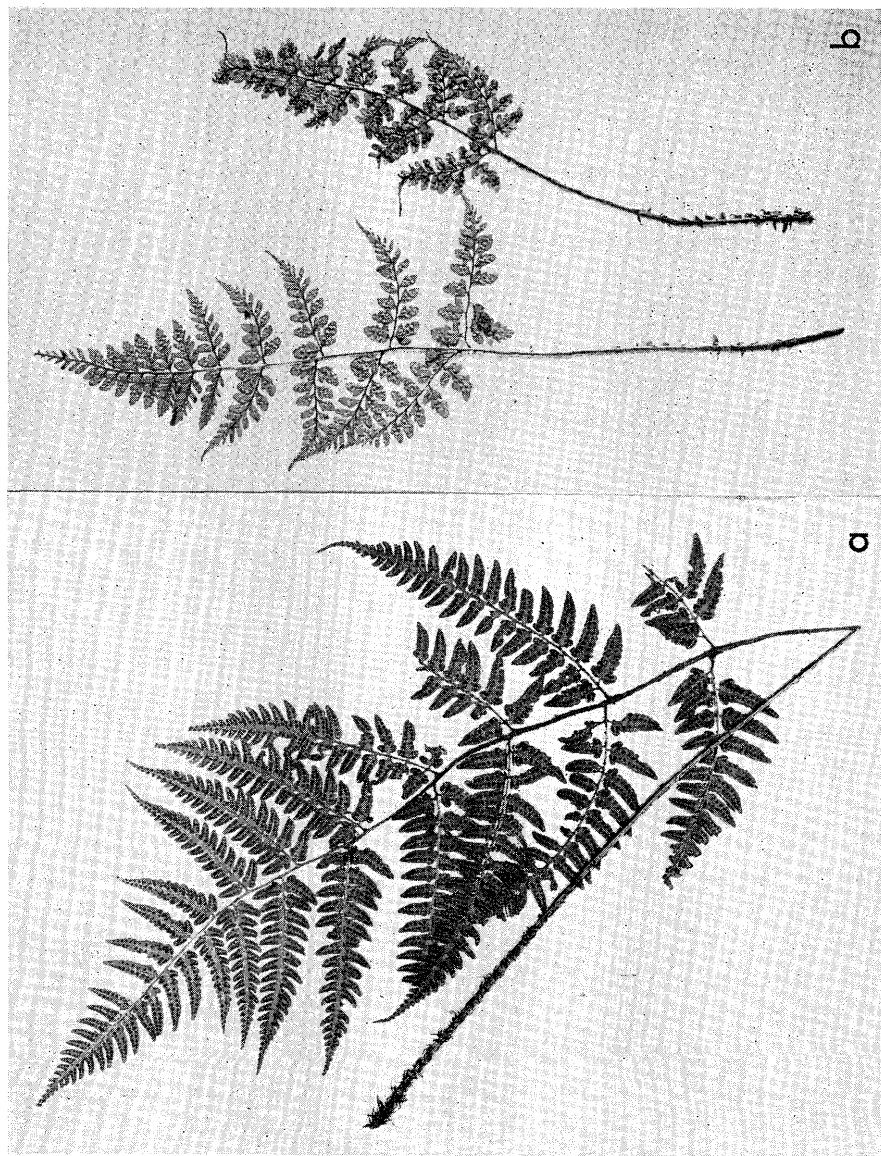


Fig. 1. a: *Dryopteris subintegriloba* (holotype). b: *Dryopteris yorii* (holotype).

The present new species is very similar to *Dryopteris integriloba* of South-China and Indochina, and may be its geographical form. Especially, arrangement of sori, long petiolules and cordate base of pinnulae, and colour of scales agree well with those of *D. integriloba*. However, *D. integriloba* has marginal sori, narrower scales, and somewhat shallowly dissected and always not serrate pinnulae.

The spore number of *D. subintegriloba* is generally 32 per sporangium, and according to the private information from Dr. Kanamori, this fern actually shows apogamous reproduction, as in most species of the *D. erythrosora* complex.

11. ***Dryopteris tenuipes*** (Rosenst.) Serizawa, stat. nov.

Dryopteris erythrosora var. *tenuipes* Rosenst., Hedwigia 56: 341 (1915); Hayata, Ic. Pl. Formos. 8: 147 (1918); Makino et Nemoto, Fl. Jap. ed. 2, 56 (1931); Nemoto, Fl. Jap. Suppl. 37 (1936); H. Ito, Bot. Mag. Tokyo 50: 69 (1936).

Nom. Jap. Usuba-benishida (Makino et Nemoto).

Distr. Taiwan; Urai (U. Faurie no. 63 and 64).

The present fern, which was treated by H. Ito (1939) as a synonym of *Dryopteris erythrosora* var. *typica* form. *typica*, distinctly differs from *D. erythrosora* in blackish and copious scales on the stipes. In addition to this, smaller fronds, thinner texture of laminae, and sparser bullate scales on the costae of pinnae are also distinguishing characters. Among the Formosan species, *D. tenuipes* is somewhat similar to *D. labordii* and *D. subintegriloba*, but differs from the former in more copious scales and distinct petiolules of medial pinnae, and from the latter in shorter petiolules of lower pinnae and pinnulae, truncate base of pinnulae, and more or less costal sori.

12. ***Dryopteris* × *mituii*** Serizawa, hybr. nov.

Dryopteris lacera form. *intermedia* H. Ito sensu Mitui, Journ. Jap. Bot. 42: 28-32 (1967).

Dryopteris lacera (Thunb.) O. Kuntze × *Dryopteris uniformis* (Makino) Makino

Ab anteriore differt pinnis fertilibus vix abbreviatis, squamis rhachidis fuscioribus margine distincte setosis; a posteriore differt venis impressis, sporis abortivis.

Nom. Jap. Ainoko-kumawarabi (H. Ito), Kumawarabi-modoki (Hiyama).

Hab. Enokubo-sawa, Minami-takao, Hachioji-shi, Pref. Tokyo (S. Serizawa no. 1906, June 1966—holotype in TNS); Motohachioji-shiroyama, Hachioji-shi (S. Serizawa no. 1761, June 1966).

Distr. Japan (Honshu, Shikoku and Kyushu).

One of the isoparatype specimens of the present new hybrid species was illustrated by Mitui, who studied it cytotaxonomically, in this journal vol. 42 p. 29 fig. 1B. Although the type specimen of *D. lacera* form. *intermedia* was not located, I think that this form is probably identical with the present hybrid.

13. **Dryopteris yoroii** Serizawa, sp. nov. Fig. 1. b.

Rhizoma ignotum. Stipes 14–16 cm longis circiter 2 mm crassus supra sulcatus, rufo-castaneus ad basim dense sursum parce squamatus; squamis basalibus lanceolatis circiter 10 mm longis apice filiformi-acuminatis membranaceis ferrugineis, squamis ceteris subdimorphis, squamis angustioribus lanceolatis 4.5–6 mm longis 1–1.5 mm latis apice acuminatis sed non filiformis basi rotundatis margine integris, papyraceis discoloribus, i. e. medio castaneis margine pallidioribus, squamis latioribus ovatis vel ovato-lanceolatis 5–7 mm longis 2.5–4 mm latis apice acutis margine integris ferrugineis. Lamina elongato-ovata 13–18 cm longa 7–11 cm lata apice acuminata gradatim attenuata subrigido-herbacea flavescento-viridis bipinnata; pinnis utrinque circiter 8 jugis, deltoideo-lanceolatis a se 1.5–3 cm remotis; pinnis infimis 5–7 cm longis, petiolulis 4–5 mm longis, pinnulis infimis inferioribus longissimis deltoideo-ovatis 1.5–2 cm longis 0.9–1.3 cm latis pinnatisectis apice obtusis basi truncatis aequilateris petiolulatis, petiolulis circiter 1 mm longis; pinnulis pinnarum inferiorum utrinque 6–8 jugis, ellipticis 0.7–1.1 cm longis apice obtusis vel rotundatis et non aristatis basi anteriore lato-cuneatis plerumque auriculatis posteriore cuneatis; pinnulis infimis tote anadromis; rhachidibus et costis pinnarum squamis 0.5–2 mm longis parce obtectis. Venae interdum fuscatae, apice subampliatae translucetes, in pagina inferiori pilis multicellulatis subparce obtectae. Sori rotundati 1.2–1.3 mm lati, dorsuales, costulales vel subcostulales, indusiis reniformi-cordatis.

Nom. Jap. Ko-yamamusumeshida, nov.

Hab. Taiwan: between Yushankou and Paiyun-cottage, Mt. Yushan, Pref. Chia-yi (R. Yoro, Aug. 1968—holotype in TNS); the uppermost dis-

trict of Takochin-chi, Pref. Hsin-chu (T. Shimizu no. 20383, July 1963, TI).

The anadromous arrangement of the lowest pinnulae and amplificate apex of veinlets of the present new species agree with those of *Dryopteris hasseltii* and *D. diffracta*, which are generally treated as *Arachniodes*. But *D. yoroi* differs from them in scaly stipes, rachidis and costae of pinnae, and presence of multicellular hairs. On the other hand, *D. yoroi* is also similar to the *D. sparsa* complex, especially *D. obtusissima* of Ceylon, but differs from this complex in amplificate apex of veinlets, presence of multicellular hairs, and dimorphic scales. Following the general concept, the present fern belongs to *Arachniodes*. However, such a generic criterion as the anadromous or catadromous arrangement of the lowest pinnulae seems to be not generic, but specific character. For example, anadromous (*D. obtusissima*), opposite (*D. hayatae*, etc.) and catadromous (*D. viridescens*, etc.) arrangements are found in the *D. sparsa* complex. I described, therefore, the present fern as a species of *Dryopteris* at present.

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(9) ヒメコケシノブ (伊藤, 1949) は朝鮮から記載されたコウライコケシノブと同じものである。すでに Copeland や岩槻が指摘しているように, *Hymenophyllum paniculiflorum* とは異なる。ホソバコケシノブによく似ているが, 小さいずんぐりした葉身, 幅広い裂片, 葉身の先端に集ってつく胞子のう群などで区別できる。一般にホソバコケシノブより標高の高い所や北に寄った地方に分布しているが, 混生地でも独立性を保っているから別種として扱うべきである。検し得た標本は, 岩手盛岡市 Yanagawa (M. Kikuchi, 1967N*), 秋田大葛村 (古家儀八郎, 1939T*), 山形奥山寺 (加藤信英, 1959F*), 飯豊山 (同), 越前大野市赤鬼山 (渡辺定路, 1962F), 大町扇沢 (芹沢, 1969N), 菅平根子岳山頂 (同), 日光霧降滝 (? , 1899N), 奥秩父梓白岩山 (伊藤 洋, 1955E*), 瑞牆山 (伊藤, 1953E), 増富一金山 (同), 雲取山 (伊藤, 1950E), 鷹巣山 (芹沢, 1970N), 御岳 (井上 浩, 1952E), 黒山三滝上の山 (伊藤, 1952E), 丹沢塔ヶ岳—幽神—檜洞沢 (大場秀章, 1962T), 富士山 (? , 1881T), 富士大宮口 (Y. Yabe, 1924E), 天城山白田休泊所下 (倉田, 1949F), 南アルプス鳳凰山 (伊藤, 1952E), 仙丈岳 (岡不崩, ?N), 豊口山 (芹沢, 1969N), 聖平—遠山川 (同), 安倍峠 (大村敏明, 1954F), 井川東河内沢 (芹沢, 1967N), 水窪黒沢岳 (倉田, 1948F), 因幡氷の山 (生駒・川本, 1955E), 伊予別子山村 (井上,

* Eは東京教育大学理学部植物学教室, Fは東京大学農学部森林植物学教室, Nは国立科学博物館, Tは東京大学理学部植物学教室の所蔵標本を示す。

1953E), 土佐楓ヶ森 (伊藤, 1938T), 筒上山 (芹沢, 1970N), 朝鮮金剛山 (T-Uchiyama, 1902T-type, M. K., 1910F), 済州島 in sylvis Torsoumi (Taquet, 1910T) などである。九州からの報告もあるが, 確実な標本は見た事がない。

10) ホウライベニシダ (新称) は中国大陸南部やインドシナの *Dryopteris integriloba* に非常によく似ているが, 胞子のう群が中間生で, 鱗片がやや幅広く, 小羽片の辺縁にしばしば鋸歯がでる事などで区別できる。

11) ウスバベニシダ (牧野・根本, 1931) は葉柄に黒色の鱗片が密生する点でベニシダとは明らかに異なり, 独立種として扱うのが妥当である。

12) クマワラビとオクマワラビの雑種と推定されるシダには適当な学名がない。アイノコワラビ (伊藤, 1939) は同一のものと思われるが, 基準標本が見当たらないので, 新雑種として記載した。

13) コヤマムスメシダ (新称) はリュウキュウシダやハネガエリシダに似ているが, 葉柄や中軸に鱗片がつき, 葉裏脈上に多細胞の毛がある点で異なる。ナガバノイタチシダ類にも似ているが, 脈端がふくらんで半透明になり, 鱗片が二型性で, 多細胞の毛がある。最下小羽片が上先きにつくので, 一般の定義に従えばカナワラビ属に含まれるが, 小羽片のつき方だけでオシダ属とカナワラビ属を分けるのは疑問があるから, ここではオシダ属の一種として記載した。

○ヤマノイモの根茎 (津山 尚) Takasi TUYAMA; On the tuber of *Dioscorea japonica* Thunb.

一昨年 12 月静岡市在住の友人石上剛氏からヤマノイモのいわゆる“自然生”(ジネンジョウ)を頂いた。各地で小量に売られてもいるが, 節くれ立った根茎の様子が造型的にも面白かったので, 表紙のカットにして見た。根茎から発生する細根の基部は急に太くなり, 時には円盤状を呈していてこの種の特長を示している。“自然生”でも土壌の深くやわらかい所のものは, 細い頸部から下方は大体円柱状の棍棒形であるが, 石があったり, 地下水が高い所では, その部分を避けてまがりくねる。収穫期の秋が深まると, 地上茎の一部を残して, 上方は枯れ去り, 根茎をさがし当てるのが困難になる。このために前もって根元にミギの種子を播いておいて, 冬期の堀取りの目印にすることもあるという。カットの標本は今は静岡市に併合された久能尾(キューノオ)の山林で採れたもので, 斜線の部分は堀取りの際にスキで損傷した部分を示す。日本のヤオヤの店先で普通に見られるツクネイモは根茎が扇状に水平に広がっている。東インド地方では *Dioscorea* は重要な食料品であり, Ochse の Indische Groenten には各種の Yams の根茎の図が多く描かれている。中には一度下向した根茎が反曲して再び上向して来るものもあるらしい。こうした tropism の各種, 各品種, および環境による変化は研究の対象になりそうである。(お茶の水女子大学)